WHAT IS CLAIMED IS:

1. A method of fabricating a magnetic memory device having a magnetic stack structure interposed between a lower and upper electrode, the method comprising:

forming an insulating layer so as to define a recessed well above the lower electrode traces;

forming the magnetic stack structure within the recessed wells above the lower electrode;

planarizing the magnetic stack structure to define a magnetic bit shape using chemical-mechanical polishing; and

forming the second electrode on the magnetic stack structure.

2. The method of Claim 1, wherein forming the first electrode comprises depositing the first electrode using a damascene process.

3. The method of Claim 1, wherein forming the magnetic stack structure comprises forming a magnetic pinned layer, a barrier layer, and a magnetic sense layer.

4. The method of Claim 1, wherein defining the recessed well comprises defining a recessed well with sloped interior walls.

5. The method of Claim 1, wherein defining the recessed well comprises defining an elliptical recessed well with concaved interior walls.

6. The method of Claim 1, wherein defining the recessed well comprises defining a semi-spherical recessed cavity.

7. The method of Claim 1, wherein the method further comprises forming a thin dielectric layer having a via hole interposed between the magnetic stack structure and the upper electrode.

8. The method of Claim 1, wherein forming the magnetic stack structure comprises forming an MRAM cell.

9. The method of Claim 1, wherein forming the magnetic stack structure comprises forming a lower magnetic sense layer, a barrier layer, an upper magnetic pinned layer, and a CMP stop layer.

10. A method of fabricating a magnetic memory device, the method comprising:

forming a first electrode having an upper exposed surface within a substrate using a damascene process;

forming a magnetic pinned layer on the upper exposed surface of the first electrode so as to establish a conductive interconnection therewith;

forming a dielectric layer adjacent to the substrate so as to provide a recessed region with sloped interior side walls adjacent to the magnetic pinned layer for the subsequent forming of an overlying barrier layer and a magnetic sense layer;

depositing the barrier layer overlying the magnetic pinned layer;

depositing the magnetic sense layer overlying the barrier layer;

planarizing the barrier layer and the magnetic sense layer so as to define at least one magnetic bit shape using a chemical-mechanical polishing technique and stopping adjacent to the dielectric layer; and

forming the second electrode on the magnetic sense layer so as to establish a conductive interconnection therewith.

11. A method of fabricating a magnetic memory device on a substrate, the method comprising:

forming a lower electrode having an upper exposed surface within the substrate using a damascene process;

forming a thick dielectric layer adjacent to the substrate so as to provide a recessed region above the upper exposed surface of the lower electrode;

forming a magnetic pinned layer on the thick dielectric layer so as to overlie the recessed region;

forming a barrier layer that overlies the magnetic pinned layer;

forming a magnetic sense layer that overlies the barrier layer;

forming a CMP stop layer that overlies the magnetic sense layer;

planarizing the magnetic pinned layer, the barrier layer, the magnetic sense layer, and the CMP stop layer to define at least one magnetic bit shape using a chemical-mechanical polishing technique and stopping adjacent to the thick dielectric layer;

forming a thin dielectric layer adjacent to the thick dielectric layer and the CMP stop layer;

forming at least one via hole in the thin dielectric layer so as to provide an opening adjacent to the CMP stop layer; and

forming an upper electrode on the thin dielectric layer adjacent to the via holes so as to provide conductive contact to the CMP stop layer.